

REMARKS

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First, the propriety of the "finality" of the action is questioned. The Examiner is requested to re-consider and withdraw the "finality" of this action on the following basis.

It is noted that in the Disposition of Claims the Examiner has acknowledged that the application now contains a claim 22, entered in the last Response to a non-Final action, as a matter of right. However, there is no indication in the present action that this claim has been examined. Accordingly, the status of this claim is unclear, and a new non-Final action including examination of claim 22 is believed to be in order.

Additionally, the Examiner also introduces an apparent new issue, namely, a "special rejection, used in limited circumstances, without any explanation thereof. More on this below.

Further, the Examiner appears to raise a new issue in the rejection of claims 1, 4-15 and 17-21 as being unpatentable over a combination of Hoster and Wang. Specifically, the Examiner for the first time "alludes to" a reference 23 on page A496 of Hoster apparently to a " PtRu alloy...as suggested by Gastelger et al 23 ". Although this is not a rejection per se, it is submitted that it is improper to raise such an issue at this late stage in the proceedings. More on this below.

Claim Rejections, Prior Art

" Claims 1, 4-10 and 20 are rejected under 35 U.S.C. 102(e) as anticipated by, or in the alternative , under 35 U.S.C. 103(a) as obvious over Laine et al. 6551960. The previous rejection is incorporated herein by reference."

Regarding the issue of anticipation, in the previous rejection referred to by the Examiner, it is stated that "The reference teaches in columns 2-4 and 8 Pt and Ru on a support, with nanosized metal clusters, and a similar synthesis using ethylene glycol and heating. While the catalyst is not identically described, no differences are seen due to the similarity of the methods", and that "The overlapping size of column 8 renders the claims unpatentable".

In our last response, detailed arguments were presented on page 6/12, which clearly establish that the reference "nanoparticles" are within a particle size range of 50-100 nm, which is five to ten times larger than our claimed particle size range. Accordingly, the Examiner is invited to re-consider this argument.

Regarding the "similar synthesis" the inclusion of an essential pH range of 12 to 8, which provides controlled particle size, is neither taught nor suggested in Laine.

It is also emphasized that the claims in question all contain a specifically defined Pt:Ru percentage ratios of 70:30 to 80:20.

The Examiner rebutted these arguments, further stating that "the argument concerning Laine is noted, but the reference is deemed to create the claimed size particles, which would not be visible(the white spots in the micrographs). It is evident that many of the visible white spots are smaller than the 50 nm range that applicant argues that Laine is limited to."

First, the Examiner takes the position that the reference is "deemed to create the claimed particle sizes which would not be visible". In this respect, applicant fails to see how the Examiner "deems" that the reference discloses particles in our claimed nanosize range, when we have shown to the contrary in our arguments. In fact this is precisely why the SEM images shown in the reference are at best inconclusive, and this is admitted by the authors of the Laine et al reference i.e. at col. 9, lines 4-6 "since resolution is poor below 0.5 microns."

Moreover, the Examiner's apparent suggestion that the "white spots" represent particles is without any basis in the reference. It is submitted that in the absence of any guidance in the written description, the "white spots" could be anything, including dust on the negatives used to print the photographs.

Further, within the scale of the figure in the reference, the white spots are not less than 50 nm in diameter.

What is certain, and apparently accepted by the Examiner, is that particles in our claimed size range of 0.8 to 10 nm would not be visible on such an SEM image.

The Examiner then invites us to repeat the experiments of Laine and provide the TEM data to prove that their particle sizes are larger. It is respectfully submitted that although TEM would show particle sizes in the 50-100 nm range, such particle sizes are orders of magnitude larger than our claimed particle size range of 0.8 to 10 nm. . Moreover, Laine discusses a wide range of supports and reactant concentrations, making it virtually impossible to select what or how many conditions to employ. For example, we could select one condition resulting in a large particle size, leaving the argument open that another condition would have resulted in smaller particles. Accordingly, for practical purposes, such experiments would be pointless. .

Regardless, in view of the evidence of record, it is respectfully submitted that the 102(e) rejection is untenable, and must be withdrawn.

With respect to the Obviousness Issue, the Examiner argued that "While the claimed Pt:Ru is not exemplified , it is unpatentable due to the range taught in column 2."

First, as pointed out above and in the previous response, there is no overlap in particle sizes and the "range" taught in column 2 is merely a series of very broad ranges, none of which are enabled in the working examples, wherein the Pt:Ru compositions are not described at all. In fact, all of the examples only describe the catalyst in terms of total metal loads, rather than our claimed specific Pt:Ru compositions. Accordingly, there is no enabled disclosure of our claimed compositions, and accordingly, no basis for a prima facie case of Obviousness, and the Examiner is requested to withdraw this issue.

Further, regarding the issue of overlapping particle sizes, in our last response we made of record the recent Atrofina case, with specific details of its relevance to the present fact situation. The Examiner simply dismisses this argument and refers generally to *Re: Malagari*, without any indication of reasoning. If this rejection is maintained in an Advisory Action or a further non-Final action, an explanation of the Examiner's reasoning is believed to be in order.

Next, the Examiner states that "A 102/103 is not a 102 and a 103. It is a special rejection, used in limited circumstances." With all due respect, perhaps something is missing here? At least, some explanation in an Advisory or non-Final action of what constitutes this "special rejection" is clearly in order.

Further, "Claims 1, 4-15, 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laine taken with Wang article." The details of the Examiner's position are the same as in the last action.

In his rebuttal of our arguments presented in the last response, the Examiner adds that "no patentable difference between a pH of "12" vs "> 12" is seen, and further that "it is not seen why pH control has one effect for the applicant, yet a different effect in the references."

The simple answer to this is that the Wang reference is restricted to a pH range of " >12" , and our claimed process employs a pH in the range of "12 to 8" . Clearly, there is no overlap in this range.

Moreover, the Examiner's citations of Titanium Metals v. Banner 227 USPQ 773 and In re Kirsch 182 USPQ 286, are meaningless without some explanation of the Examiner's reasoning. Accordingly, it is requested that in any Advisory or further non-Final action include the Examiner's reasoning.

Regarding our claimed products, neither Laine nor Wang disclose our claimed composition(Wang being restricted to single metal), or the claimed specific combination of chemical composition and particle size..

According, the combination of Laine and Wang fails to establish a prima facie case of Obviousness and the Examiner is requested to withdraw this issue.

With respect to the rejection of Claims 1, 4-7, 9, 11-15 and 17-21 under 35 U.S.C. 103(a) as being unpatentable over Hoster article taken in combination with Wang, in relation to Hoster, the Examiner further states "the reference alludes to reference 23 and deposition techniques on pg. A496. these should be submitted in order to evaluate the particles taught by Hoster."

First, in our last Response we pointed out that Hoster relates to the formation of preformed metals(not particles) including some PtRu alloys. In fact, the reference clearly states at p. A497, column 1 under the heading "Electrode Samples" that all samples were mirror polished disks....purchased from Johnson Matthey".

Clearly, these materials are not in particulate form, which renders the alloy compositions moot.

Accordingly, it is again submitted that Hoster represents non-analogous prior art, not properly combinable with Wang to establish a prima facie case of Obviousness.

Further, even if the combination was proper, which it is not, since Wang fails to disclose either our claimed products or method as argued above, there is no prima facie case of Obviousness.

Yet further, the Examiner for the first time in the prosecution, alludes to an item 23 on page A496 of Hoster. Why was this not raised as an issue earlier in the prosecution?

It is respectfully submitted that we have already provided ample evidence that the Hoster reference is restricted to preformed metals and as such represents non-analogous prior art. If this is accepted, any claim rejection combining Hoster with reference "23" would be moot.

In any case, the full cite for reference "23" is "Surface Science 293 (1993) 67-80 North-Holland, LEIS and AES on sputtered and annealed polycrystalline Pt-Ru bulk alloys, H.A Gasteiger et al. . The Examiner will appreciate from the title alone that, like Hoster, this reference has nothing to do with particulate alloys, and also represents non-analogous prior art. A copy of this reference is enclosed for the Examiner's information.